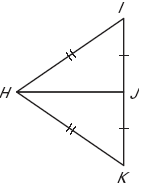
Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP: \_\_\_\_\_\_\_

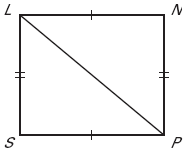
CW 39: Side – Side – Side Postulate

**Honors Geometry**

***Is it possible to prove that two triangles are congruent without having to prove ALL 3 pairs of congruent sides are congruent?***

1. Determine if the two triangles are congruent. If so, write a congruency statement and identify what postulate is needed to prove congruency.

1. What rigid motion would map triangle HIJ onto triangle HKJ?

2. Determine if the two triangles are congruent. If so, write a congruency statement and identify what postulate is needed to prove congruency.

a. What rigid motion would map triangle LPN onto triangle LSP?

|  |  |
| --- | --- |
| 3. Prove the following:  Given:  FJ HJ  G is the midpoint of FH  Prove: Δ*FGJ* ≅Δ*HGJ*   1. What rigid motion would map triangle JFG onto triangle JHG? | 4. Prove the following:  **Given:** JL ≅ ML  JK ≅ MK  **Prove:** Δ*KJL* ≅Δ*KML* |

5. Δ*DFG* has vertices *D*(−2, 4), *F*(4, 4), and *G*(−2, 2). Δ*LMN* has vertices *L*(−3, −3), *M*(−3, 3), and *N*(−l, −3).   
  
a) Graph the triangles in the same coordinate plane

b) List the corresponding sides and use evidence to justify that the sides are congruent.

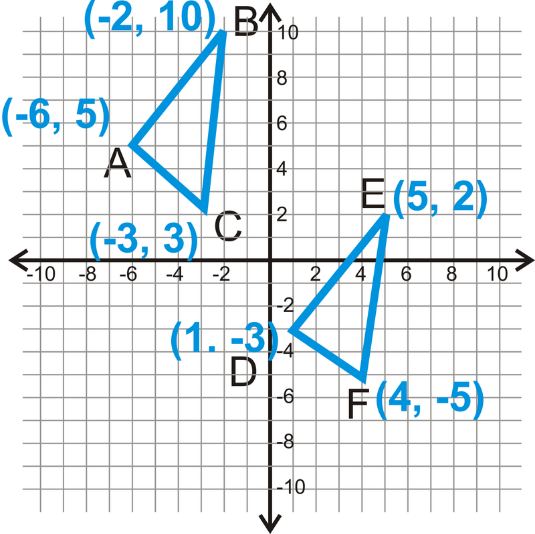
c) Brianna says that the two triangles are congruent. Do you agree or disagree with Brianna? Justify your answer using mathematical evidence.

6. Use the given coordinates to determine if Δ*ABC* ≅Δ*DEF.* Hint: find the measure of all the sides!

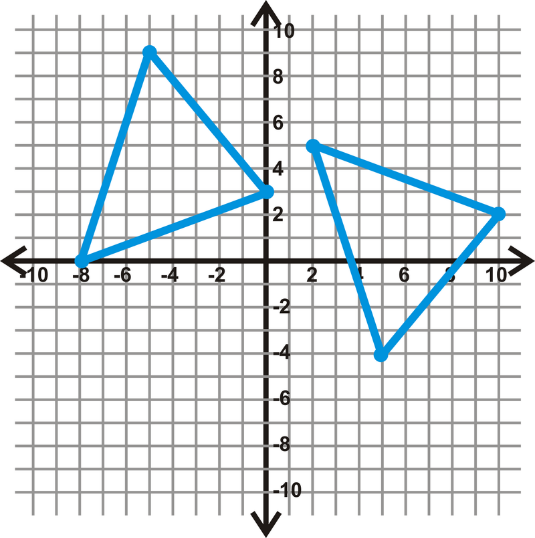
*A*(1, 2), *B*(4, –3), *C*(2, 5), *D*(4, 7), *E*(7, 2), *F*(5, 10)  
  
a) Graph the triangles in the same coordinate plane

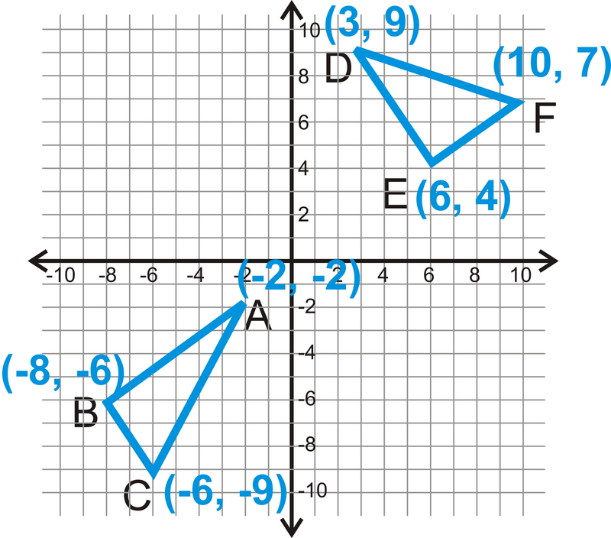
b) List the corresponding sides and use evidence to justify that the sides are congruent. Hint: find the measure of all the sides!

c) William says that the two triangles are congruent. Do you agree or disagree with William? Justify your answer using mathematical evidence.

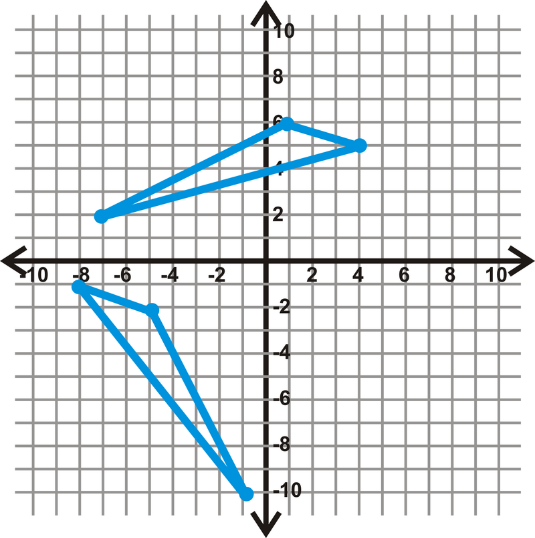
7.Determine if . Then determine what transformation took place.

8. Determine if the two triangles are congruent. Then determine what transformation took place.

****



9**.** Determine if . Then determine what transformation took place.



10.Determine if the two triangles are congruent. Then determine what transformation took place.